

August 14, 1962

MEMORANDUM FOR THE RECORD

SUBJECT: Analysis of Equipment Plans

1. The original proposal of IBM was a sound recommendation. It proposed an IBM 1401 system of sufficient capacity (8000 core storage, four Type 7330 Tape Drives, and a Type 1404 Printer/Bill Feed) to be considered as a full scale, self contained data processing system. The tape drives were sufficient to permit high speed sorting; an important and fundamental function in any data processing application. The IBM Type 1922 Foreign Tape Drive Adapter provided a means of reading IBM cards and converting them to edited magnetic tape records for input to the RCA 501 Computer. The Type 1922 also provided a means of reading the RCA 501 tapes and printing or card punching the output data from the RCA 501 Computer. The Type 1404 Printer/Bill Feed offered an opportunity to reduce significantly our IBM 407/408 punched card accounting machines, even were we to hold one 407 for utility use. The reliability of the IBM 1401 hardware, availability of tested software, technical support of IBM representatives, savings in EAM equipment and operators, and overall economics of the proposal lead one to believe that this would have been an excellent plan for us. Apparently this belief was shared by others since it was strongly endorsed and recommended.

2. Instead of the original IBM proposal, we have ordered a more or less minimum IBM 1401 system configuration which is sufficient to overcome the mechanical difficulties which are being experienced with the RCA 501 input/output equipment. A number of card processing operations can be performed on this equipment, but the absence of the four Type 7330 Tape Drives eliminates the possibility of high speed sorting operations or the possibility of storing data files on magnetic tape for future updating or processing operations within the IBM 1401 system. Normally, only one of the eight RCA Type 581 Tape Drives will be available for feeding the RCA 501 output into the line printing or card punching equipment of the IBM 1401 system or for receiving input data for the RCA 501 from the IBM 1401 card reading equipment. The IBM Type 1404 Printer/Bill Feed has not been ordered with the current IBM 1401 System, but in view of the strong justification previously made for this equipment one must question this decision.

3. Where do we stand today? First of all, it is only five months since we ordered the IBM 1401 System. We did this after RCA's proposal for an RCA 301 System and DMJM's endorsement of the RCA 301 System as a reliable, cost comparable system.....We have trained a number of people to program the 1401. We have received necessary technical support from IBM for the preparation of required input/output routines.

The reliability of card reading, card punching, and line printing operation with the 1401 system is still unchallenged. In fact, RCA has recently announced the availability of IBM 1401 input/output equipment with the RCA 301 Data Processing System. There is reason to believe that RCA has cured their printer problems with the switch to the Anelex printer. Some doubt still exists regarding the reliability of RCA card reading equipment. We have had what may be considered normal programming frustrations in learning to program a new system for a rather unusual application. This situation should improve rapidly with experience and installation of the 1401. We have already completed the one time alteration requirements and incurred these costs. The 1401 system is now in Washington awaiting installation approximately 30 days hence. IBM has raised the rental on the Type 1922 Foreign Tape Adapter from \$925 to \$1810, but this will not be effective until 1 July 1963. We have witnessed user demonstrations of the IBM 1401 and RCA 301 systems. We are currently re-evaluating our equipment plans.

4. We have done our best to make the right decisions in the choice of equipment. We are pretty far "down the road" to make an abrupt change in course at this time unless extremely serious obstacles are apparent. Until the recent notification by IBM of a price increase in 1963, our plans were to install the IBM 1401 system on September 15th. Why should we not proceed as planned?

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